MARSHALL BREAKING HEAD VERIFICATION PROCEDURE

A. PURPOSE

The Marshall breaking heads used in stability and flow testing shall meet the requirements of AASHTO T 245, "Resistance to Plastic Flow of Bituminous Materials Using Marshall Apparatus." Only the critical dimensions should be verified. The critical dimensions are the continuity of the internal radius and height of the bevel on both test head segments.

B. APPARATUS REQUIRED

1. A calibrated caliper accurate to 0.001 inch (0.01 mm)
2. A measuring device machined to meet the requirements of the breaking head internal radius to the nearest 0.001 inch (0.01 mm). The location of the bevel should be scribed into the device. See Figure 1 for a general sketch.

C. PROCEDURE

CHECKING THE BREAKING HEAD

1. Position the measuring device just inside of the breaking head and check the fit. The fit should be snug with no discontinuities (bulges, depressions, etc.). Note any discontinuities on the worksheet.
2. Line the centerline of the device with the bottom of the breaking head and check that the location of the bevel matches the bevel indicator line on the measuring device. Angle of the bevel is not a critical dimension.
3. Repeat Steps 1 and 2 for the center of the breaking head and just inside the other end of the breaking head.

D. TOLERANCE

The internal radius of the breaking head should show no discontinuity. The bevel lines should match the bevel locations precisely to conform to AASHTO T 245. If not in compliance, the breaking head should be removed from service.

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Figure 1 - Marshall Breaking Head Insert

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Volume Change Rings Checklist

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